CONTENTS

PART 1. FEBRUARY

PAGE

WALLACE, MARGARET E. (Cambridge). Affinity: Evidence from crossing inbred lines of mice 1

NOLTE, D. J. (Johannesburg). The pigment granules in the compound eyes of *Drosophila* 25

DOWDESWELL, W. H. (Winchester). Experimental studies on natural selection in the butterfly, *Maniola jurtina* 39

GODWARD, M. B. E. (London). Meiosis in *Spirogyra crassa* 53

COOPER, J. P., and EDWARDS, K. J. R. (Aberystwyth). The genetic control of leaf development in *Lolium*. I. Assessment of genetic variation . . 63

LAWRENCE, C. W. (Wantage). The effect of the irradiation of different stages in microsporogenesis on chiasma frequency 83

YOUNG, S. S. Y. (Sydney). The use of sire's and dam's records in animal selection 91

NOTES AND COMMENTS:

PARSONS, P. A. The initial progress of new genes with viability differences between sexes and with sex linkage 103

REVIEWS:

Evolution after Darwin 109

Genetics and Twentieth Century Darwinism 110

Aspects of the Origin of Life 111

BRODRICK, A. H. Man and His Ancestry 111

PART 2. MAY

DINSLEY, MARJORIE, and THODAY, J. M. (Cambridge). Fitness and artificial selection 113

REES, H., BALUCH, M. A., and JAMES, D. B. (Aberystwyth). Variation in the mineral composition of rye seedlings 123

DAVIES, D. R., and WALL, E. T. (Wantage). The effect of gamma irradiation on the sex ratio of *Melandrium* species 131

GRUN, P., and RADLOW, ANNE (Pennsylvania). Evolution of barriers to crossing of self-incompatible with self-compatible species of *Solanum* . 137

JAMES, J. W. (Brisbane). Selection in two environments 145

JINKS, J. L. (Birmingham). Gene structure and function in the h_{III} region of bacteriophage T4 153

DOBZHANSKY, TH., and PAVLOVSKY, OLGA (Columbia). A further study of fitness of chromosomally polymorphic and monomorphic populations of *Drosophila pseudoobscura* 169

PAGE

HENDERSON, S. A. (Birmingham). Chromosome number and behaviour in the grasshopper *Pholidoptera* 181

JOHN, B., and NAYLOR, B. (Birmingham). Anomalous chromosome behaviour in the germ line of *Schistocerca gregaria* 187

MILLICENT, ELIZABETH, and THODAY, J. M. (Cambridge). Effects of disruptive selection. IV. Gene-flow and divergence 199

THODAY, J. M., and BOAM, T. B. (Cambridge). Effects of disruptive selection. V. Quasi-random mating 219

NOTES AND COMMENTS :

GRAFIUS, J. E. The complex trait as a geometric construct . . . 225

MEDAWAR, P. B. The future of man : a reply 228

REVIEWS :

HOLLAENDER, A. (Ed.). Radiation Protection and Recovery . . 231

FOCKE, R. Erbliche Schäden durch Ionisierende Strahlen . . . 231

PENROSE, L. S., and BROWN, H. L. (Ed.). Recent Advances in Human Genetics 232

KOENIGSWALD, G. H. R. Die Geschichte des Menschen . . . 233

BOOKS RECEIVED 234

GENETICAL SOCIETY OF GREAT BRITAIN : Abstracts of Papers . . . 235

PART 3. AUGUST

JINKS, J. L. (Birmingham). Internal suppressors of the h_{III} and *tu*45 mutants of bacteriophage T4 241

CROSBY, J. L. (Durham). Teaching genetics with an electronic computer . 255

RILEY, R., and KIMBER, G. (Cambridge). Aneuploids and the cytogenetic structure of wheat varietal populations 27

EDWARDS, A. W. F. (Cambridge). The population genetics of " sex ratio " in *Drosophila pseudoobscura* 291

GURDON, J. B. (Oxford). The transplantation of nuclei between two subspecies of *Xenopus laevis* 305

MCDONALD, D. J., and PEER, NANCY J. (Penn.) Natural selection in experimental populations of *Tribolium*. II. Factors affecting the fitness of the mutant " split " of *Tribolium confusum* 317

SAUNDERS, J. H. (Khartoum). The mechanism of hairiness in *Gossypium* . 331

NOTES AND COMMENTS :

GIBSON, J. B., PARSONS, P. A., and SPICKETT, S. G. Correlations between chaeta number and fly size in *Drosophila melanogaster* . . . 349

HASKELL, G., and HILL, J. Segregation in tetraploid blackberries . . 354

GILDENHUYS, P., and BRIX, K. Genic control of aneuploidy in *Pennisetum* 358

PAGE

REVIEWS :

GLASS, B. Science and Liberal Education 365
HASKELL, G. Practical Heredity with Drosophila 365
BANTON, M. (Ed.) Darwinism and the Study of Society . . . 366

BOOKS RECEIVED 367

PART 4. NOVEMBER

ROBERTS, R. C. (Edinburgh). The lifetime growth and reproduction of selected strains of mice 369

JAIN, H. K., and MAHERCHANDANI, N. (New Delhi). The control of intranuclear distribution of chiasmata in *Delphinium* 383

KETTLEWELL, H. B. D. (Oxford). Geographical melanism in the Lepidoptera of Shetland 393

KETTLEWELL, H. B. D., and BERRY, R. J. (Oxford). The study of a cline. *Amathes glareosa* Esp. and its melanic *f. edda* Staud (Lep.) in Shetland . 403

KETTLEWELL, H. B. D. (Oxford). Selection experiments on Melanism in *Amathes glareosa* Esp. (Lepidoptera) 415

COOPER, J. P. (Aberystwyth). Selection and population structure in *Lolium*. V. Continued response and associated changes in fertility and vigour . 435

PARSONS, P. A. (Cambridge). Fly size, emergence time and sterno-pleural chaeta number in *Drosophila* 455

BATTAGLIA, B., and SMITH, H. (Padua and New York). The Darwinian fitness of polymorphic and monomorphic populations of *Drosophila pseudoobscura* at 16° C. 475

BODMER, W. F. (Cambridge). Viability effects and recombination differences in a linkage test with pallid and fidget in the house mouse 485

ROWLANDS, D. G. (Aberystwyth). Fertility studies in the field bean (*Vicia faba* L.). II. Inbreeding 497

NOTES AND COMMENTS :

FITZGERALD, P. H., and LYCETTE, R. R. Mosaicism in Man, involving the autosome associated with Mongolism 509
HILL, J. Conditioning in *Arabidopsis thaliana* 513

REVIEWS :

ALLARD, R. W. Principles of Plant Breeding 516
WHITE, M. J. D. The Chromosomes 516
LASKER, G. W. The Evolution of Man 518
LASKER, G. W. (Ed.). The Processes of Ongoing Human Evolution . 518
GARDNER, L. I. (Ed.). Molecular Genetics and Human Disease . . 518
MÜNTZING, A. Genetic Research 519

GENETICAL SOCIETY OF GREAT BRITAIN : Abstracts of Papers . . . 522

INDEX OF SUBJECTS 525

INDEX OF AUTHORS 527